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**Subject:** FYI - In the Bennington Banner 10/14/11: Tests - PA Gas Drilling Town's Water Still Fouled

## Tests: Pa. gas drilling town's water still fouled

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DIMOCK, Pa. (AP) -- Three years after residents first noticed something wrong with their drinking-water wells, tanker trucks still rumble daily through this rural northeastern Pennsylvania village where methane gas courses through the aquifer and homeowners can light their water on fire.

One of the trucks stops at Ron and Jean Carter's home and refills a 550-gallon plastic "water buffalo" container that supplies the couple with water for bathing, cleaning clothes and washing dishes. A loud hissing noise emanates from the vent stack that was connected to the Carters' water well to prevent an explosion -- an indication, they say, the well is still laced with dangerous levels of methane.

Recent testing confirms that gas continues to lurk in Dimock's aquifer.

"We're very tired of it," says Jean Carter, 72. Tired of the buffalo in their yard, tired of worrying about the groundwater under their house, and tired of the fight that has consumed Dimock every day since the fall of 2008.

Like everyone else here, the Carters are eager to turn the page on the most highly publicized case of methane contamination to emerge from the early days of Pennsylvania's natural-gas drilling boom. Cabot Oil & Gas Corp., the Houston-based energy firm held responsible and fined hundreds of thousands of dollars for polluting the groundwater, is just as anxious to resume drilling in a 9-square-mile area of Dimock that has been placed off-limits to the company until it repairs the damage.

State regulators blame faulty gas wells drilled by Cabot for leaking methane into Dimock's groundwater. It was the first serious case of methane migration connected to Pennsylvania's 3-year-old drilling boom, raising fears of potential environmental harm throughout the giant Marcellus Shale gas field. Drilling critics point to Dimock as a prime example of what can and does go wrong.

Methane from gas-drilling operations has since been reported in the water supplies of several other Pennsylvania communities, forcing residents to stop using their wells and live off water buffaloes and bottled water. Though gas companies often deny responsibility for the pollution, the state has

imposed more stringent well-construction standards designed to prevent stray gas from polluting groundwater.

Dimock's long quest for clean water may finally be reaching a critical stage.

After a series of false starts, Cabot, one of the largest drillers in the Marcellus, said it has met the state's Oct. 17 deadline to restore or replace Dimock's water supply, installing treatment systems in some houses that have removed the methane.

Residents who have filed suit against Cabot disagree, saying their water is still tainted and unusable. Another homeowner claims the \$30,000 treatment system that Cabot put in failed to work.

Ultimately, it will fall to the Pennsylvania Department of Environmental Protection to decide whether Cabot has fulfilled its obligation to the residents, whose story was highlighted in last year's Oscar-nominated documentary "Gasland."

If regulators sign off, the company plans to resume work on a dozen gas wells in Dimock. And, in a move sure to infuriate the residents, it will also stop paying for water deliveries to the Carters and several others whose wells were tainted with methane and, some say, toxic chemicals.

It's not clear how DEP will respond to Cabot's bid to restart operations, but spokeswoman Katherine Gresh said the agency is not under any deadline.

"DEP will continue to require Cabot to do this work until we are satisfied that the methane migration problem has ceased, regardless of how long it takes," she said via email.

An odorless, colorless, tasteless gas, methane is commonly found in Pennsylvania groundwater. Sources include swamps, landfills, coal mines and gas wells. Methane is not known to be harmful to ingest, but at high concentrations it's explosive and can lead to asphyxiation.

Despite company assurances of clean water, testing reveals that methane persists in Dimock's aquifer.

A Cabot contractor who sampled the water in mid-September found an extremely high level of gas in the enclosed space of a water well owned by Craig Sautner, who is among the plaintiffs suing Cabot. Test results supplied by DEP indicate that five more homes had levels of dissolved methane that exceeded the standard set by a December 2010 agreement between DEP and Cabot -- the same agreement whose conditions Cabot says it has met.

The latest results, Sautner said, prove that nothing has changed. He said Cabot also tested his well on Sept. 1, drawing water that resembled coffee with cream.

"I don't know why Cabot says there aren't any problems in Dimock," said Sautner, 58. "If they're going to say that our water's fine, I want them to be the first guinea pigs and drink it. Nice, big, tall glass of water."

Cabot spokesman George Stark did not have details of the Sept. 1 test at Sautner's house, but said any well that hasn't been used for a while will produce murky, stagnant water and require purging. He characterized the mid-September methane spike as an anomaly and said the big picture is that Dimock's water supply has been fixed.

"The water is clean for the families inside that area," he said.

Questions also remain about the integrity of gas wells that Cabot has already drilled.

As recently as May, DEP said nearly half of Cabot's wells in the Dimock area -- 20 of 43 -- continued to leak methane, including 14 that DEP said were of the "most concern." In a letter obtained by The Associated Press, Craig Lobins, regional manager in DEP's oil and gas program, wrote to Cabot that the leaking wells indicate faulty construction and that Cabot had "yet to achieve full compliance" with DEP mandates.

Cabot disagreed with DEP's assertions about its gas wells, and has been supplying documentation to the agency showing that all the wells are safe, Stark said.

He said Cabot fully expects to be given permission to drill five new wells and hydraulically fracture seven existing wells in Dimock, a tiny crossroads in the heart of one of the most prolific gas-bearing regions of Pennsylvania.

Hydraulic fracturing, or fracking, is the technique that's allowed Cabot and other drillers to harvest previously unreachable gas from the Marcellus and other deep shale formations around the United States. Fracking involves the high-pressure injection of millions of gallons of water, along with sand and chemical additives, to crack open shale deposits more than a mile underground and free the gas locked inside it.

The gas industry, as well as Pennsylvania environmental regulators, say the process has been used safely for decades. Environmental activists and some residents contend it can pollute groundwater. The U.S. Environmental Protection Agency is analyzing whether fracking diminishes the quality of drinking water -- with Dimock as one of several case studies.

Some Dimock residents say their water wells were fouled not only with methane that DEP said migrated from improperly cemented Cabot gas wells, but possibly with toxic chemicals that Cabot uses in the drilling process. The company denied responsibility, suggesting a nearby auto repair shop was to blame for the presence of toxins that a consultant working for the plaintiffs found in the wells last year.

Victoria Switzer, whose water was found to be contaminated with toluene and ethylene glycol, doesn't believe Cabot's explanation.

The 58-year-old retired schoolteacher lived in a trailer for several years while her husband, also a teacher, built their dream home on seven wooded acres. She planned to live in it a long time, to host children and grandchildren. Even after methane contaminated her water, Switzer felt she could deal with it as long as the gas could be vented.

But chemicals are another thing.

"I want to live in this home, but I have to have drinking water," she said. "I have to have water that doesn't freak me out with wondering what's in it today."

Along with Sautner, who's appeared at countless gas-drilling forums with a jug of brown water drawn from his well, Switzer has traveled widely to talk about her experiences and warn audiences about what she see as the dangers of drilling and fracking.

In response to their assertions and activism, Cabot publicized its own test results showing that their well water met federal drinking-water standards. Switzer responded that well water quality can be highly variable, appearing fine one day, foul the next. As recently as a few weeks ago, she said, her water was foamy and smelled bad.

The problems in Dimock, a rural township about 20 miles south of the New York state line, first arose

in September of 2008, a month after Cabot started drilling in the area. The water that came out of residents' faucets suddenly became cloudy, foamy and discolored, and smelled and tasted foul. Homeowners, all of whom had leased their land to Cabot, said the water made them sick with symptoms that included vomiting, dizziness and skin rashes.

After a water well exploded on New Year's Day 2009, a state investigation found that Cabot had allowed combustible gas to escape into the region's groundwater supplies, contaminating at least 18 residential water wells.

Cabot asserts the methane in the residents' wells is naturally occurring. It denies polluting the water -- with methane or anything else -- even though DEP has said its tests confirmed the gas migrated from Cabot's wells. Cabot itself signed off on two consent agreements with DEP, in November 2009 and April 2010, in which the company acknowledged polluting Dimock's water supplies with methane and spilling chemicals into a creek.

The contamination helped fire a national debate over the unconventional drilling techniques that brought Cabot to Dimock in the first place. It also created a deep rift among Dimock's citizens that may never be healed, especially after residents who are suing Cabot refused to accept a DEP-brokered deal with the company.

"People are mad because we took a stand. They think we should cave in," Sautner said.

Cabot casts Dimock, population 1,400, as a community held hostage by a small group of residents who are impossible to please. The argument has gained traction. Many homeowners living in the moratorium area are anxious for Cabot to start drilling again so they can begin receiving royalties on the land they have leased to the company.

Dimock landowner and tax collector Esther Rayias, 57, part owner of a 180-acre farm that's been in her family for four generations, said she favors "safe and responsible drilling." Cabot built a pad on her farm but hasn't been able to drill.

"We don't want this land destroyed. We don't want to be ravaged. But from what we've seen, Cabot has not done any of that," said Rayias, who wrote to Pennsylvania Environmental Secretary Michael Krancer over the summer to urge him to lift the drilling ban.

The company has plenty of support in Dimock and the rest of Susquehanna County. In July, Cabot drew several thousand people to a community picnic. One of the 18 Dimock homeowners whose well was polluted with methane, Loren Salsman, recently posted a column online accusing the plaintiffs of being more concerned with money than water. "I know contamination, and there's none in Dimock!" wrote Salsman, who accepted a Cabot treatment system and said he drinks his well water.

Stark, the Cabot spokesman, said it's time to break the logjam and get on with business.

"Everyone will have their day in court. But at the same point, I think there is the ability to say what we are doing in Susquehanna County is safe, we meet the standards. You don't get to be one of the largest drillers in the commonwealth doing things haphazardly."

But it was precisely due to Cabot's haphazard approach to Dimock that residents suffered the loss of their water supply three years ago, state regulators found.

After finding that Cabot failed to live up to the terms of two previous agreements to fix Cabot's water, DEP announced in September 2010 that it would force the company to pay nearly \$12 million to connect the homes to a municipal water line 6 miles away. Residents cheered the move as a

permanent solution to their problem. But opposition from Cabot and many other residents and local elected officials -- who viewed the water line as a costly boondoggle that taxpayers would ultimately get stuck with -- forced DEP to scuttle the plan.

Instead, the environmental agency struck a bargain with Cabot last December under which the company would pay each of the affected residents twice the value of their homes, a total of \$4.1 million, and provide a treatment system to remediate the gas. Then-Environmental Secretary John Hanger said the settlement would help the residents put their lives back together -- and send a strong message to the industry that pollution would not be tolerated.

But the 11 plaintiffs who qualified for the deal, none of whom were consulted beforehand, saw it as a betrayal. None of them took the money or a treatment system, and appealed the consent agreement to the state's Environmental Hearing Board. The appeal is pending. "One day you're saved, the next day you're lost, and you never get any resolution," Switzer said of the scuttled water line.

A half-dozen homeowners, though, did take the money and request the systems. One couple, Michael and Suzanne Johnson, who are not among the plaintiffs suing Cabot, said recently that it didn't work.

The Johnsons wrote in late August that the system "has not fully restored the water to Primary & Secondary Drinking water standards," making the assertion in a court brief they filed that sought to quash a subpoena from the plaintiffs' attorneys.

Suzanne Johnson declined to talk about why they believe their system failed to treat the water. Test results obtained by the AP show their well water had a high level of ethylene glycol, but Cabot's Stark said the lab acknowledged it was a false positive. Tests before and after turned up no ethylene glycol in the well.

The Johnsons' well has also recorded high levels of aluminum, iron and manganese, all of which can affect the taste, smell and color of water but do not generally pose a health hazard. DEP believes methane can elevate levels of all three metals.

Cabot's agreement with DEP, though, does not make the company liable for any chemicals or metals that have turned up in the residents' water -- nor does it require the company to treat the water for anything other than methane.

"Cabot does not have to provide a system that treats the water to safe drinking water standards," confirmed Gresh, the DEP spokeswoman. Instead, she said, the residents are supposed to use the settlement money from Cabot to remediate any other problem they have with their water.

Another resident who accepted the treatment system, Jessica Hein, said the water that comes out of her faucet is clear. But she still doesn't drink it and probably never will, preferring instead to use bottled water for drinking and cooking.

"It's not a risk I'm willing to take. Too many chemicals were used in the fracking process," said Hein, a 38-year-old nurse who moved to Endwell, N.Y., with her husband and two elementary-age children shortly before Cabot's arrival. The family kept the house in Dimock as a getaway but doesn't go there much anymore.

Switzer, who lives next door to the Johnsons, said their experience has convinced her that Cabot's system is not the way to go.

"It looks like a fourth-grade science experiment gone insane, gone wrong," Switzer said. "I don't want

one of (Cabot's) chicken sheds in my yard." She said she might be willing to take a system of her own choosing so long as Cabot pays for it.

Cabot doesn't agree with Switzer's characterization, saying the treatment systems they've provided do what they are supposed to -- remove methane. Indeed, test results show dramatic reductions in wells with the systems.

And that's where the heart of the disagreement lies. The company says that if there are chemicals, metals or any other contaminants, it had nothing to do with putting them there. The plaintiffs believe Cabot, with the state's help, is escaping responsibility for what it did to them -- and that environmental regulators, once so gung-ho on holding Cabot accountable, have lost interest in Dimock's plight.

Sautner said Scott Perry, DEP's oil and gas program chief, told him that Cabot would never have agreed to pay for a more elaborate system that removes additional contaminants from well water.

Perry said, "You have to pay for that yourself," Sautner recalled. "I said, 'I'm not gonna pay for water that somebody else destroyed.' He said, 'What do you think that (settlement) money was, an early retirement present?'"

Perry also predicted to Sautner that the plaintiffs would never win their suit against Cabot because "you don't have enough evidence against them," Sautner recalled.

Through Gresh, Perry denied Sautner's account.

"This is not how Scott recollects any of his conversations with Mr. Sautner," Gresh said. "Scott has made it clear to him that the (consent agreement) obligates Cabot to the treatment systems, and that the other funds are available to address whatever issues the homeowner sees fit."

Perry and Krancer, the DEP secretary appointed by first-year, pro-drilling Gov. Tom Corbett, declined interview requests.

Jean Carter, who lives a few hundred feet from a pair of gas wells, said she and her husband have spent countless hours worrying about the water. Cabot asserts their supply is fine, pointing to test results that show an insignificant level of dissolved methane in the Carters' well water.

Yet the hissing noise from their disconnected well persists. It's a cause for yet more worry, but the Carters said they're trying not to let it get to them.

"We have this water problem. They've got to do something, sometime. I don't know when that's going to be, but in the meantime we have to go on with our lives and not let it consume us and make us miserable," she said. "Because we are only hurting ourselves."

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